

SEQUENCE LISTING

<110> Virca, Duke
Bird, Timothy A.
Anderson, Dirk M.
Marken, John S.

<120> Human cDNAs Encoding Polypeptides Having Kinase Functions

<130> 2877-US

<160> 16

<170> PatentIn Ver. 2.0

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<212> DNA

<213> Homo sapiens

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1085

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cgctccgaaa	aacagcagag	acgaagagaa	gagagagtca	cgcatacaaga	gctactcgcc	300
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      20             25             30

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Gln Ala Pro Phe Leu Val Thr Leu His Tyr Ala Phe Gln Thr Asp Ala
      35             40             45

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<213> Homo sapiens

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Ala Ser His Gln Ala Glu Pro Glu Ala Tyr Glu Arg Arg Val Cys Phe
      20             25             30

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Leu Leu Leu Gln Leu Cys Asn Gly Leu Glu His Leu Lys Glu His Gly
      35             40             45

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Ile Ile His Arg Asp Leu Cys Leu Glu Asn Leu Leu Leu Val His Cys
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Ala	Arg	Ala	His	Ala	Glu	Arg	Arg	Gly	Glu	Met	Arg	Ala	Thr	Pro	Leu
		35					40					45			
Ala	Ala	Pro	Ala	Gly	Ser	Leu	Ser	Arg	Lys	Lys	Arg	Leu	Glu	Leu	Asp
		50				55					60				
Asp	Asn	Leu	Asp	Thr	Glu	Arg	Pro	Val	Gln	Lys	Arg	Ala	Arg	Ser	Gly
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Pro	Gln	Pro	Arg	Leu	Pro	Pro	Cys	Leu	Leu	Pro	Leu	Ser	Pro	Pro	Thr
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Ala	Pro	Asp	Arg	Ala	Thr	Ala	Val	Ala	Thr	Ala	Ser	Arg	Leu	Gly	Pro
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Tyr	Val	Leu	Leu	Glu	Pro	Glu	Glu	Gly	Gly	Arg	Ala	Tyr	Gln	Ala	Leu
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His	Cys	Pro	Thr	Gly	Thr	Glu	Tyr	Thr	Cys	Lys	Val	Tyr	Pro	Val	Gln
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His	Val	Ala	Arg	Pro	Thr	Glu	Val	Leu	Ala	Gly	Thr	Gln	Leu	Leu	Tyr
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Ala	Phe	Phe	Thr	Arg	Thr	His	Gly	Asp	Met	His	Ser	Leu	Val	Arg	Ser
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Arg	His	Arg	Ile	Pro	Glu	Pro	Glu	Ala	Ala	Val	Leu	Phe	Arg	Gln	Met
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Ala	Thr	Ala	Leu	Ala	His	Cys	His	Gln	His	Gly	Leu	Val	Leu	Arg	Asp
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225					230					235					240
Val	Leu	Glu	Asn	Leu	Glu	Asp	Ser	Cys	Val	Leu	Thr	Gly	Pro	Asp	Asp
			245						250					255	
Ser	Leu	Trp	Asp	Lys	His	Ala	Cys	Pro	Ala	Tyr	Val	Gly	Pro	Glu	Ile
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Leu	Ser	Ser	Arg	Ala	Ser	Tyr	Ser	Gly	Lys	Ala	Ala	Asp	Val	Trp	Ser
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Leu	Gly	Val	Ala	Leu	Phe	Thr	Met	Leu	Ala	Gly	His	Tyr	Pro	Phe	Gln

290 295 300

Asp Ser Glu Pro Val Leu Leu Phe Gly Lys Ile Arg Arg Gly Ala Tyr
 305 310 315 320

Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala Arg Cys Leu Val Arg Cys
 325 330 335

Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu Thr Ala Thr Gly Ile Leu
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Leu His Pro Trp Leu Arg Gln Asp
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Trp Leu Leu Leu Pro Phe Phe Lys Arg Gly Thr Leu Trp Asn Glu Ile
 35 40 45

Glu Arg Leu Lys Asp Lys Gly Asn Phe Leu Thr Glu Asp Gln Ile Leu
 50 55 60

Trp Leu Leu Leu Gly Ile Cys Arg Gly Leu Glu Ala Ile His Ala Lys
 65 70 75 80

Gly Tyr Ala Tyr Arg Asp Leu Lys Pro Thr Asn Ile Leu Leu Gly Asp
 85 90 95

Glu Gly Gln Pro Val Leu Met Asp Leu Gly Ser Met Asn Gln Ala Cys
 100 105 110

Ile His Val Glu Gly Ser Arg Gln Ala Leu Thr Leu Gln Asp Trp Ala
 115 120 125

Ala Gln Arg Cys Thr Ile Ser Tyr Arg Ala Pro Xaa Leu Phe Ser Val
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Gln Ser
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<210> 11
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 <213> Homo sapiens

<400> 11

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 35 40 45
 Gly Gln Val Ile His Lys Arg Cys Glu Glu Met Lys Tyr Cys Lys Lys
 50 55 60
 Gln Cys Arg Arg Leu Gly His Arg Val Leu Gly Leu Ile Lys Pro Leu
 65 70 75 80
 Glu Met Leu Gln Asp Gln Gly Lys Arg Ser Val Pro Ser Glu Lys Leu
 85 90 95
 Thr Thr Ala Met Asn Arg Phe Lys Ala Ala Leu Glu Glu Ala Asn Gly
 100 105 110
 Glu Ile Glu Lys Phe Ser Asn Arg Ser Asn Ile Cys Arg Phe Leu Thr
 115 120 125
 Ala Ser Gln Asp Lys Ile Leu Phe Lys Asp Val Asn Arg Lys Leu Ser
 130 135 140
 Asp Val Trp Lys Glu Leu Ser Leu Leu Leu Gln Val Glu Gln Arg Met
 145 150 155 160
 Pro Val Ser Pro Ile Ser Gln Gly Ala Ser Trp Ala Gln Glu Asp Gln
 165 170 175
 Gln Asp Ala Asp Glu Asp Arg Arg Ala Phe Gln Met Leu Arg Arg Asp
 180 185 190
 Asn Glu Lys Ile Glu Ala Ser Leu Arg Arg Leu Glu Ile Asn Met Lys
 195 200 205
 Glu Ile Lys Glu Thr Leu Arg Gln Tyr Leu Pro Pro Lys Cys Met Gln
 210 215 220
 Glu Ile Pro Gln Glu Gln Ile Lys Glu Ile Lys Lys Glu Gln Leu Ser
 225 230 235 240
 Gly Ser Pro Trp Ile Leu Leu Arg Glu Asn Glu Val Ser Thr Leu Tyr
 245 250 255
 Lys Gly Glu Tyr His Arg Ala Pro Val Ala Ile Lys Val Phe Lys Lys
 260 265 270
 Leu Gln Ala Gly Ser Ile Ala Ile Val Arg Gln Thr Phe Asn Lys Glu
 275 280 285
 Ile Lys Thr Met Lys Lys Phe Glu Ser Pro Asn Ile Leu Arg Ile Phe
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 Gly Ile Cys Ile Asp Glu Thr Val Thr Pro Pro Gln Phe Ser Ile Val
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 Met Glu Tyr Cys Glu Leu Gly Thr Leu Arg Glu Leu Leu Asp Arg Glu

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Arg	Gly	Leu	Tyr	Arg	Leu	His	His	Ser	Glu	Ala	Pro	Glu	Leu	His	Gly				
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Lys	Ile	Arg	Ser	Ser	Asn	Phe	Leu	Val	Thr	Gln	Gly	Tyr	Gln	Val	Lys				
	370					375					380								
Leu	Ala	Gly	Phe	Glu	Leu	Arg	Lys	Thr	Gln	Thr	Ser	Met	Ser	Leu	Gly				
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Thr	Thr	Arg	Glu	Lys	Thr	Asp	Arg	Val	Lys	Ser	Thr	Ala	Tyr	Leu	Ser				
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Pro	Gln	Glu	Leu	Glu	Asp	Val	Phe	Tyr	Gln	Tyr	Asp	Val	Lys	Ser	Glu				
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Ile	Tyr	Ser	Phe	Gly	Ile	Val	Leu	Trp	Glu	Ile	Ala	Thr	Gly	Asp	Ile				
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Pro	Phe	Gln	Gly	Cys	Asn	Ser	Glu	Lys	Ile	Arg	Lys	Leu	Val	Ala	Val				
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Lys	Arg	Gln	Gln	Glu	Pro	Leu	Gly	Glu	Asp	Cys	Pro	Ser	Glu	Leu	Arg				
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Glu	Ile	Ile	Asp	Glu	Cys	Arg	Ala	Ala	Gly	Arg	Leu	Val	Pro	Arg	Ser				
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<210> 12
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<400> 12
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 35 40 45
 Pro Asn Glu Pro Glu Gly Gly Asp Lys Ser Arg Lys Ser Ala Lys Gly
 50 55 60
 Asp Lys Gly Gly Lys Asp Lys Lys Gln Ile Gln Thr Ser Pro Val Pro
 65 70 75 80
 Val Arg Lys Asn Ser Arg Asp Glu Glu Lys Arg Glu Ser Arg Ile Lys
 85 90 95
 Ser Tyr Ser Pro Tyr Ala Phe Lys Phe Phe Met Glu Gln His Val Glu

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	115						120					125			
Glu	Gln	Glu	Met	Ala	Lys	Ala	Gly	Leu	Cys	Glu	Ala	Glu	Gln	Glu	Gln
	130					135					140				
Met	Arg	Lys	Ile	Leu	Tyr	Gln	Lys	Glu	Ser	Asn	Tyr	Asn	Arg	Leu	Lys
145					150					155					160
Arg	Ala	Lys	Met	Asp	Lys	Ser	Met	Phe	Val	Lys	Ile	Lys	Thr	Leu	Gly
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Ile	Gly	Ala	Phe	Gly	Glu	Val	Cys	Leu	Ala	Cys	Lys	Val	Asp	Thr	His
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Asn	Gln	Val	Ala	His	Val	Lys	Ala	Glu	Arg	Asp	Ile	Leu	Ala	Glu	Ala
	210					215					220				
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Ser	Leu	Tyr	Phe	Val	Met	Asp	Tyr	Ile	Pro	Gly	Gly	Asp	Met	Met	Ser
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Leu	Leu	Ile	Arg	Met	Glu	Val	Phe	Pro	Glu	His	Leu	Ala	Arg	Phe	Tyr
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Gly	Val	Ile	Leu	Phe	Glu	Met	Leu	Val	Gly	Gln	Pro	Pro	Phe	Leu	Ala
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Pro	Thr	Pro	Thr	Glu	Thr	Gln	Leu	Lys	Val	Ile	Asn	Trp	Glu	Asn	Thr
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 450 455 460
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 Ser Asp Ile Arg Lys His Pro Ala Pro Tyr Val Pro Thr Ile Ser His
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 actggagata tcccgtttca aggctgtaat tctgagaaga tccgcaagct ggtggctgtg 240
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 Pro Gln Glu Leu Glu Asp Val Phe Tyr Gln Tyr Asp Val Lys Ser Glu
 35 40 45
 Ile Tyr Ser Phe Gly Ile Val Leu Trp Glu Ile Ala Thr Gly Asp Ile
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 Pro Phe Gln Gly Cys Asn Ser Glu Lys Ile Arg Lys Leu Val Ala Val
 65 70 75 80
 Lys Arg Gln Gln Glu Pro Leu Gly Glu Asp Cys Pro Ser Glu Leu Arg
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 35 40 45
 Asn Glu Pro Glu Gly Gly Asp Lys Ser Arg Lys Ser Ala Lys Gly Asp
 50 55 60
 Lys Gly Gly Lys Asp Lys Lys Gln Ile Gln Thr Ser Pro Val Pro Val

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Arg Lys Asn Ser	Arg Asp Glu Glu Lys	Arg Glu Ser Arg	Ile Lys Ser			
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Tyr Ser Pro Tyr	Ala Phe Lys Phe Phe Met	Glu Gln His Val	Glu Asn			
	100	105	110			
Val Ile Lys Thr Tyr	Gln Gln Lys Val Asn Arg Arg	Leu Gln Leu Glu				
	115	120	125			
Gln Glu Met Ala Lys	Ala Gly Leu Cys Glu Ala Glu	Gln Glu Gln Met				
	130	135	140			
Arg Lys Ile Leu Tyr	Gln Lys Glu Ser Asn Tyr Asn Arg	Leu Lys Arg				
	145	150	155			160
Ala Lys Met Asp Lys	Ser Met Phe Val Lys Ile Lys Thr	Leu Gly Ile				
	165	170	175			
Gly Ala Phe Gly Glu	Val Cys Leu Ala Cys Lys Val Asp Thr	His Ala				
	180	185	190			
Leu Tyr Ala Met Lys	Thr Leu Arg Lys Lys Asp Val Leu Asn Arg	Asn				
	195	200	205			
Gln Val Ala His Val	Lys Ala Glu Arg Asp Ile Leu Ala Glu Ala Asp					
	210	215	220			
Asn Glu Trp Val Val	Lys Leu Tyr Tyr Ser Phe Gln Asp Lys Asp Ser					
	225	230	235			240
Leu Tyr Phe Val Met	Asp Tyr Ile Pro Gly Gly Asp Met Met Ser Leu					
	245	250	255			
Leu Ile Arg Met Glu	Val Phe Pro Glu His Leu Ala Arg Phe Tyr Ile					
	260	265	270			
Ala Glu Leu Thr Leu	Ala Ile Glu Ser Val His Lys Met Gly Phe Ile					
	275	280	285			
His Arg Asp Ile Lys	Pro Asp Asn Ile Leu Ile Asp Leu Asp Gly His					
	290	295	300			
Ile Lys Leu Thr Asp	Phe Gly Leu Cys Thr Gly Phe Arg Trp Thr His					
	305	310	315			320
Asn Ser Lys Tyr Tyr	Gln Lys Gly Ser His Val Arg Gln Asp Ser Met					
	325	330	335			
Glu Pro Ser Asp Leu	Trp Asp Asp Val Ser Asn Cys Arg Cys Gly Asp					
	340	345	350			
Arg Leu Lys Thr Leu	Glu Gln Arg Ala Arg Lys Gln His Gln Arg Cys					
	355	360	365			
Leu Ala His Ser Leu	Val Gly Thr Pro Asn Tyr Ile Ala Pro Glu Val					
	370	375	380			
Leu Leu Arg Lys Gly	Tyr Thr Gln Leu Cys Asp Trp Trp Ser Val Gly					
	385	390	395			400

Val	Ile	Leu	Phe	Glu	Met	Leu	Val	Gly	Gln	Pro	Pro	Phe	Leu	Ala	Pro	
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Thr	Pro	Thr	Glu	Thr	Gln	Leu	Lys	Val	Ile	Asn	Trp	Glu	Asn	Thr	Leu	
			420					425					430			
His	Ile	Pro	Ala	Gln	Val	Lys	Leu	Ser	Pro	Glu	Ala	Arg	Asp	Leu	Ile	
		435					440					445				
Thr	Lys	Leu	Cys	Cys	Ser	Ala	Asp	His	Arg	Leu	Gly	Arg	Asn	Gly	Ala	
	450					455					460					
Asp	Asp	Leu	Lys	Ala	His	Pro	Phe	Phe	Ser	Ala	Ile	Asp	Phe	Ser	Ser	
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Asp	Ile	Arg	Lys	His	Pro	Ala	Pro	Tyr	Val	Pro	Thr	Ile	Ser	His	Pro	
				485					490					495		
Met	Asp	Thr	Ser	Asn	Phe	Asp	Pro	Val	Asp	Glu	Glu	Ser	Pro	Trp	Asn	
			500					505					510			
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	530					535					540					
Phe	Phe	Asp	Asp	Asn	Gly	Tyr	Pro	Phe	Arg	Cys	Pro	Lys	Pro	Ser	Gly	
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Ala	Glu	Ala	Ser	Gln	Ala	Glu	Ser	Ser	Asp	Leu	Glu	Ser	Ser	Asp	Leu	
				565					570					575		
Val	Asp	Gln	Thr	Glu	Gly	Cys	Gln	Pro	Val	Tyr	Val					
			580					585								